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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/069,947	04/30/1998	JINSAUN CHEN	4006001	3924

7590 12/13/2004

DONALD C. CASEY  
311 NORTH WASHINGTON STREET  
SUITE 100  
ALEXANDRIA, VA 22314

EXAMINER
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GRIER, LAURA A

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/069,947

**Applicant(s)**

CHEN, JINSAUN

**Examiner**

Laura A Grier

**Art Unit**

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Regarding claim 2, lines 13-14, recites, “said third circuit ...”, therein. However, the specification fails to specifically disclose or provide detail a third circuit. Only the first circuit and the second circuit is specifically disclosed.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Andrea et al, U. S. Patent No. 6061456 in view of Nakagawa, U. S. Patent No. 5887066.

Regarding claim 2, Andrea et al. (herein, Andrea) discloses a noise cancellation apparatus (figure 9C) comprising a headset incorporating an active noise reduction device (400):  
the headset comprises left case (402) and cover (403) with an output transducer (460) and right case (402) and cover (403) with an output transducer (460) coupled by a headband (401) – (col. 19, lines 65-67 and col. 20, lines 1-3, 10-13), which reads the headphone structure including

the right and left cover speakers, and a headband for interconnecting the speakers; and further, the left and right ear covers comprise a circuit card (412) and further Andrea discloses that printed circuit boards may be used in headset assembly for providing circuits (col. 22, lines 48-54), which reads on a PCB installed in the headphone structure/device having 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> circuits;

the headset comprises a sensor microphone (450) that picks up noise, phase detection is taught as evidence by the presence of phase agreement in relation of the microphone and speaker, wherein the speaker provides a sound signal opposite phase of the noise (col. 30-36), which read the 1<sup>st</sup> circuit being an anti-noise circuit with a microphone, phase detection coupled the speakers for an opposite phase sound wave output;

a means is provide for providing an external audio input to the headphones, thus constituting the audio input being coupled to the phase detection and the speakers (third circuit).

Even though, Andrea obvious includes some type of receiver as evident by the fact that an audio signal is being received and processed by the headphone circuitry and indicates that other devices may be used with this headset (col. 35, lines 27-36), Andrea fails to specifically disclose a radio circuit system comprising an am/fm receiver.

Regarding the radio circuit system comprising an am/fm receiver, Nakagawa discloses an headphone apparatus (figures 6-7), which comprises a receiver unit (70) that receives FM signals, comprises demodulation (66) wherein it obvious that down converting takes place as evident by the IF means (65) – col. 5, lines 11-18, and further it would have been obvious to providing a detect circuit for detecting frequency of the processed signal within the receiver, wherein a detect circuit is a well known component of a radio receiver; and providing an

integrated circuit would have been obvious to one of the ordinary skill in the art for the purpose of making the structure more efficient in size and functionality within cups of a headset.

Nakagawa further discloses receiving a wireless coupling to external audio devices as well (col. 7, lines 31-42). Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify of Andrea by coupling the input of an external audio device to the demodulator circuit and the first circuit for the purpose of rendering noise reduction while receiving an audio signal.

#### *Response to Arguments*

4. Applicant's arguments with respect to claim 2 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that Andrea and Borchardt fail to disclose the claimed invention. Particularly, the applicant indicates that Andrea fails to disclose a closed loop reduction apparatus. In respect to the claim language, and its broadest interpretation, the claim language fails to limit the invention to a specific loop structure, it merely recites specific components that makes up the headphone structure, the essential function of the many of the devices components are claimed. Thus the art rejection of Andrea is maintained, and another reference has been introduced to replace Borchardt. The newly introduced reference provides support the common components of a radio circuit within the headphone body (like the cup) of a headphone, and how a wireless headphone device may receive wireless input from external audio devices, wherein the signals of the audio devices are processed accordingly by the radio circuit. In respect the applicant's remarks about a lack of motivation to combine the references, the three claimed

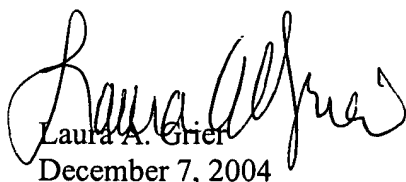
circuits of the invention are all well known structures with the same functions which are integrated in single device to serve the same function as each would individually (see Duplan Corp v. Deering Milliken, Inc. 197 USPQ 342).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Laura A. Grier  
December 7, 2004